Who should attend:
Engineer and designer

Duration:
4 days

Methodology:
Practical hands-on by using CATIA software

Introduction:
This course will teach you how to use various functionalities common across all the Machining workbenches in CATIA. It will teach you the fundamentals of creating and simulating a Manufacturing Program. You will also learn how to define and manage NC programs dedicated to machining parts that are designed with Surface or Solid geometry. You will learn how to define 3-Axis Roughing, Semi finishing and finishing operations. The course will also help you to improve productivity in mould and die machining using various functionalities of 3-Axis Surface Machining.

Objective:
Upon completion of this course you will be able to:
- Identify and use the Surface Machining workbench tools
- Define 3-Axis Surface Machining operations
- Create a Machining Area before performing the operations
- Define a Rework Area
- Analyze and modify the Tool Path

Course outline

1st Day – 2nd Day (Numerical Control Infrastructure (NCI))
- Upon completion of this course you will be able to:
  - Identify and use the Manufacturing workbenches’ tools
  - Create a Manufacturing Program
  - Simulate a Manufacturing Program
  - Manage Tools and Tool Catalogs
  - Define and verify the Tool Path
  - Generate NC data using an integrated Post Processor
  - Create shop floor documentation
  - Manage design changes
  - Import V4 data
2nd – 3rd Day - Multi Axis Surface Machining (SMG)

- Introduction to the 3-Axis Surface Machining
- Creating geometrical elements
- Creating a Machining Feature
- Creating 3-Axis Surface Machining Operations
  - Sweep Roughing Operation
  - Roughing Operation
  - Plunge Milling
  - Sweeping Operation
  - 4-Axis Curve Sweeping Operation
  - Pencil Operation
  - Zlevel Operation
  - Contour-driven Operation
  - Isoparametric machining Operation
  - Spiral milling Operation
- Profile Contouring Operation
- Probing Operations
- 3/5-Axis Converter
- Analysing and modifying tool path

4th Day - Test cut

- Material preparation for clamping in vice
- Clamping material on the vice
- Cutting tool holder preparation
- Cutting tool loading into machine’s tools magazine
- Cutting tool setup
- Origin / datum setup
- Actual cutting on machine
- Machine Basic operation
- Machine controlling
- Cutting conditions